Elektronische Bauelemente

# 2SC1383L/2SC1384L



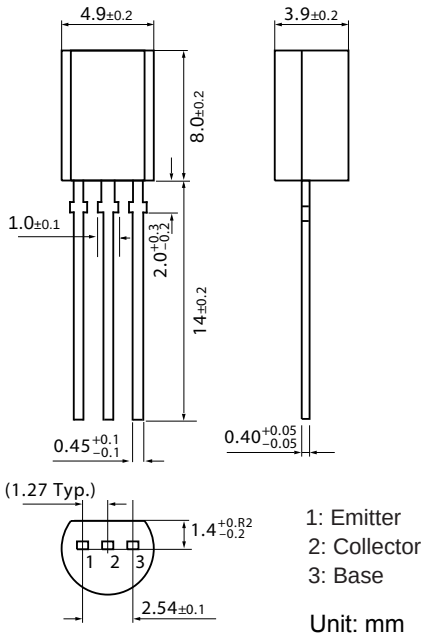
**NPN Silicon**

**General Purpose Transistor**

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

**TO-92L**




1: Emitter
2: Collector
3: Base

Unit: mm

## FEATURE

Power dissipation

$P_{CM}$: 1 W (Tamb=25℃)

Collector current

$I_{CM}$: 1 A

Collector-base voltage

$V_{(BR)CBO}$: 2SC1383L: 30 V

2SC1384L: 60 V

Operating and storage junction temperature range

$T_J$, $T_{stg}$: -55℃ to +150℃

## ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

| Parameter | | Symbol | Test conditions | MIN | MAX | UNIT |
|---|---|---|---|---|---|---|
| **Collector-base breakdown voltage** | **2SC1383L** | $V(BR)_{CBO}$ | Ic= 10μA , $I_E$=0 | 30 | | V |
| | **2SC1384L** | | | 60 | | |
| **Collector-emitter breakdown voltage** | **2SC1383L** | $V(BR)_{CEO}$ | $I_C$=2mA , $I_B$=0 | 25 | | V |
| | **2SC1384L** | | | 50 | | |
| **Emitter-base breakdown voltage** | | $V(BR)_{EBO}$ | $I_E$= 10μA, $I_C$=0 | 5 | | V |
| **Collector cut-off current** | | $I_{CBO}$ | $V_{CB}$=20V , $I_E$=0 | | 0.1 | μA |
| **DC current gain** | | $h_{FE(1)}$ | $V_{CE}$=10 V, $I_C$= 500mA | 85 | 340 | |
| | | $h_{FE(2)}$ | $V_{CE}$=5 V, $I_C$= 1A | 50 | | |
| **Collector-emitter saturation voltage** | | $V_{CE(sat)}$ | $I_C$= 500m A, $I_B$=50mA | | 0.4 | V |
| **Base-emitter saturation voltage** | | $V_{BE(sat)}$ | $I_C$= 500mA , $I_B$= 50mA | | 1.2 | V |
| **Transition frequency** | | $f_T$ | $V_{CE}$= 10 V, $I_C$= 50mA | 100 | | MHz |

## CLASSIFICATION OF $h_{FE(1)}$

| Rank | Q | R | S |
|---|---|---|---|
| **Range** | 85-170 | 120-240 | 170-340 |



Any changing of specification will not be informed individual

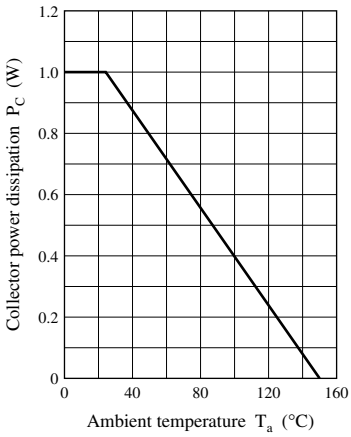
# 2SC1383L/2SC1384L



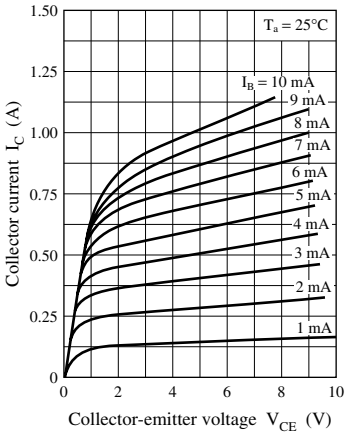
## NPN Silicon

## General Purpose Transistor

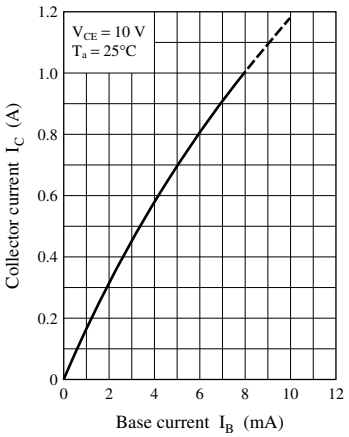
$P_C$ — $T_a$



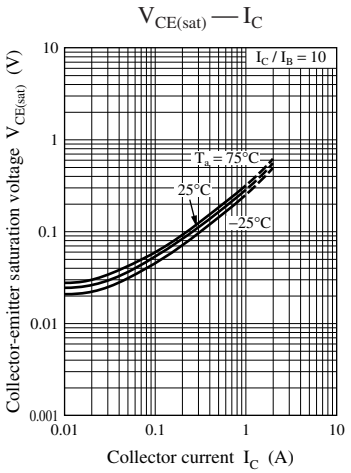

$I_C$ — $V_{CE}$



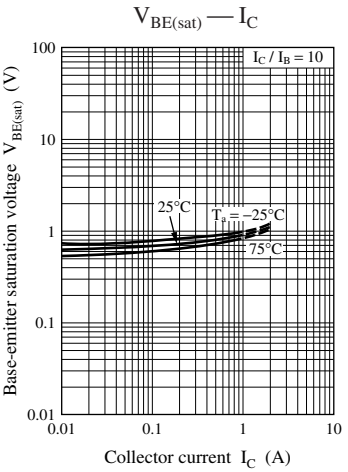

$I_C$ — $I_B$



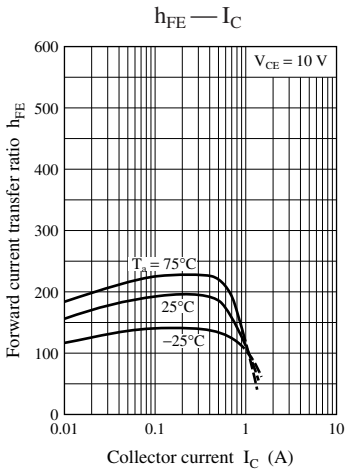

$V_{CE(sat)}$ — $I_C$



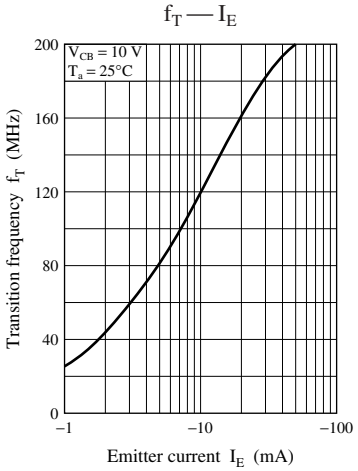

$V_{BE(sat)}$ — $I_C$



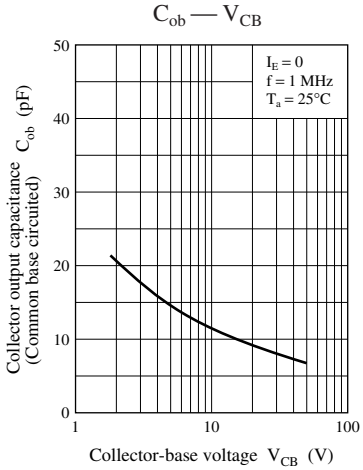

$h_{FE}$ — $I_C$



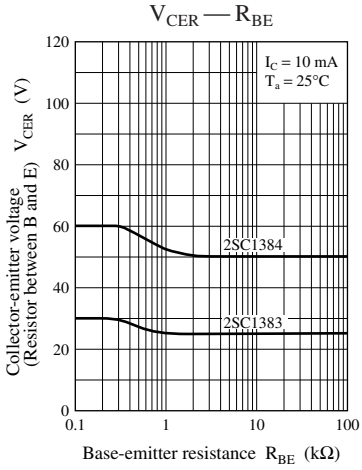

$f_T$ — $I_E$




$C_{ob}$ — $V_{CB}$



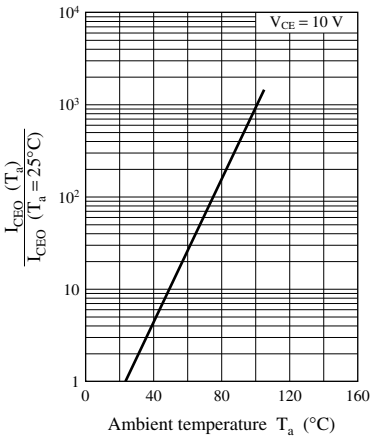

$V_{CER}$ — $R_{BE}$



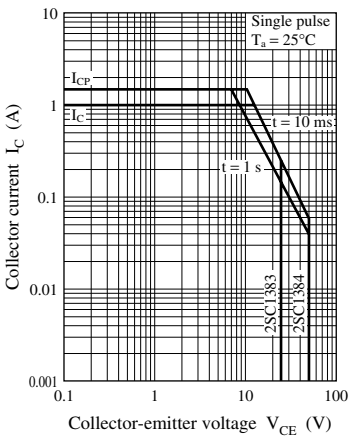



Any changing of specification will not be informed individual

$I_{CEO}$ — $T_a$




Safe operation area






Any changing of specification will not be informed individual